

IN THE CLAIMS:

Please cancel claims 1 - 9 and 13 - 15.

Claims 1-9. (Cancelled).

Claims 13-15. (Cancelled).

Please amend claims 10 - 12 as indicated below.

Claims 16 - 18 have been allowed.

Claims 10 - 12 have been amended and rewritten to include all limitations of the base claim and any intervening claims.

10. (Currently Amended). In a component balancer system utilizing a computer for storing and executing a software program, a process for optimizing the sequence of processing component-based transactional applications, comprising the steps of:

- (a) selecting several methods (A,B,C, . . . N) to be conditioned for analysis;
- (b) gathering runtime data from said selected methods in order to find statistical operating significance between selected pairs (AB, BA, AC, CA, BC, CB, . . . ) of methods;
- (c) collecting data to get a representative workload involving said pairs (AB, BA, AC, CA, BC, CB, . . . ) of said selected methods;
- (d) establishing an analysis report to determine when said method pairs (AB, BA, AC, CA, BC, CB, . . . ) are processed to determine the average response time for processing when methods A,B,C, . . . N are run singly (non-overlapped) and when method pairs are run overlapped as AB, BA, AC, CA, BC, CB, . . . .;

~~The method of claim 9 which includes the steps of:~~

- (e) calculating a statistical number (F-value) which indicates the variance between average non-overlapped response times for A,B,C, . . . N and average response times for overlapped pairs of methods AB, BA, AC, CA, BC, CB, . . . .
- (f) inquiring if the deviation in response times is below a threshold or if the average response time is below t milliseconds;

(g) selecting, above a threshold or an average response time, method calls having a deviation greater than t milliseconds;

(h) optimizing those method calls indicating a deviation greater than a threshold n involving an average response time greater than t milliseconds said optimization being effectuated by injecting code into a running application.

11. (Currently Amended). In a component balancer system utilizing a computer for storing and executing a software program, a process for optimizing the sequence of processing component-based transactional applications, comprising the steps of:

(a) selecting several methods (A,B,C, . . . N) to be conditioned for analysis;

(b) gathering runtime data from said selected methods in order to find statistical operating significance between selected pairs (AB, BA, AC, CA, BC, CB, . . . ) of methods;

(c) collecting data to get a representative workload involving said pairs (AB, BA, AC, CA, BC, CB, . . . ) of said selected methods;

(d) establishing an analysis report to determine when said method pairs (AB, BA, AC, CA, BC, CB, . . . ) are processed to determine the average response time for processing when methods A,B,C, . . . N are run singly (non-overlapped) and when method pairs are run overlapped as AB, BA, AC, CA, BC, CB, . . . .;

(e) calculating a statistical number (F-value) which indicates the variance between average non-overlapped response times for A,B,C, . . . N and average response times for overlapped pairs of methods AB, BA, AC, CA, BC, CB, . . . .

(f) inquiring if the deviation in response times is below a threshold or if the average response time is below t milliseconds;

(g) selecting, above a threshold or an average response time, method calls having a deviation greater than t milliseconds;

(h) optimizing those method calls indicating a deviation greater than a threshold n involving an average response time greater than t milliseconds said optimization being effectuated by injecting code into a running application, The method of claim 10 wherein step (h) includes the step of:

(h1) delaying the processing of one method in an overlapped pair of methods.

12. (Currently Amended). The method of claim 11 wherein step (h) further includes the step of:

(h2) removing a method if a period of time B, elapses during which that method has not been called.

16. (Currently Amended). A component balancer system for setting and managing response time goals for the processing of multiple component-based application methods (A,B,C, . . . N) said system utilizing a computer for storing and executing a software program, and wherein said application methods follow a fixed execution profile, said system comprising:

(a) means to discover and capture applications, transactional machines and components to be processed using a component runtime conditioner (CRC);

(b) means to analyze pairs of methods (AB, BA, AC, CA, BC, CB) to determine which method response times are affected by other methods;

(c) means to select those method pairs which show a substantial variance between the non-overlapped and the overlapped response times during the period involved with means (b) to analyze pairs;

(d) means to optimize the processing of selected method pairs by injecting code into a running application;

(e) means to apply delays in the processing of one associated method of a method pair said means operating to change the execution profile of said transactional applications.

17. (Original). The system of claim 16 where said means (e) to condition delays includes:

(e1) means to calculate said delay as a delay parameter using a fuzzy logic method to optimize said processing.

18. (Original). The system of claim 17 which includes:

(e2) means to adjust said delay increment according to the load on the system as sensed by the number of calls per second.